

KEY POINTS

- Libya is experiencing both a popular democratic transition and fast growth in its information and communication technology (ICT) sector.
- The Libyan government (pre- and post-revolution) has backed ICT development through significant infrastructure investments and national policies targeting ICT use in education and government.
- Increased use of ICT in civic affairs could create new opportunities for participation in democracy that would otherwise be limited by barriers such as location, sex or ethnicity.
- In their efforts to support the democratic transition of Libya, the international donor community should support the integration of ICT training in to the national education curriculum; support the use of short message service (SMS) technology for election monitoring; provide technical assistance in the development of Libya's online and mobile technology for government functions (e-government); and support the expansion of ICT training programs among government employees and civil servants.

FURTHERING DEMOCRACY IN LIBYA WITH INFORMATION TECHNOLOGY: OPPORTUNITIES FOR THE INTERNATIONAL DONOR COMMUNITY

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INTRODUCTION

Social media such as blogs, social networking sites and other web-based and mobile communication tools played a central and celebrated role in the 2011 uprisings that took place in the Arab world, facilitating the organization and coordination of popular resistance to dictatorial regimes in Libya, Tunisia and Egypt. The use of social media channels to popularize and concentrate resistance was made possible, in part, by the recent growth of the ICT sector in the region.¹ While the lack of economic growth, job opportunities and political agency were fundamental driving forces behind the Arab revolutions (Joseph, 2012: 157), ICT and social media were tools that helped to transform the deep-seated discontent into a widespread social movement.

This policy brief considers how the international donor community can support the development of the ICT sector to support democratization in Libya. While social media and the Internet did not feature as prominently in the resistance movement in Libya as they did in Tunisia

¹ ICT includes services such as telephone, Internet and cellular networks, the devices that allow access to such services and the products that rely on them, including email, websites, social media and Voice over Internet Protocol.

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and Egypt, in a context where the state-controlled media was almost completely blacked out shortly after the protests started, citizens-as-journalists managed to release first-hand reports using satellite communications, an improvised Internet connection to neighbouring Egypt, and a makeshift alternative mobile network in Benghazi (Rooney, 2012).

Libya's interim government, the National Transition Council (NTC), which is recognized by the United Nations, proposes to lead the country through its transition to democracy (NTC, 2011). ICT has the potential to assist this process by making more information available online, increasing online services and expanding avenues for participation in democracy and civic affairs that would otherwise be limited by factors such as the geographic distance between communities, inadequate information and cultural hierarchies.

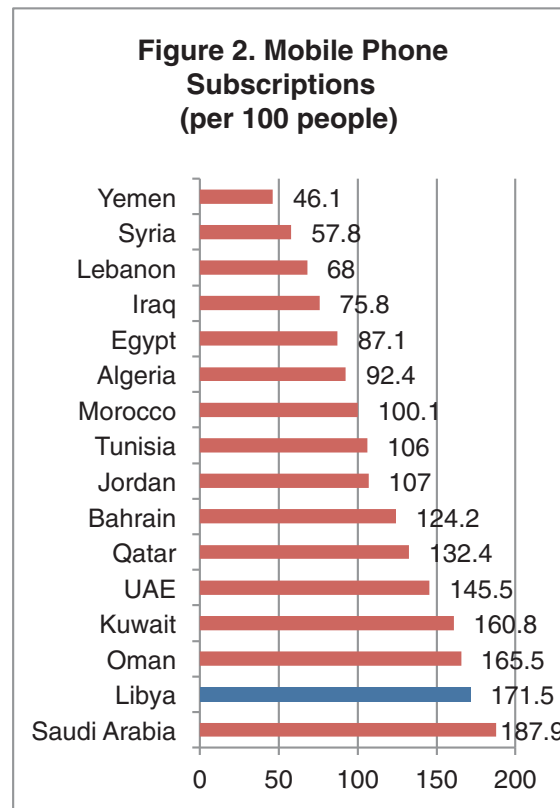
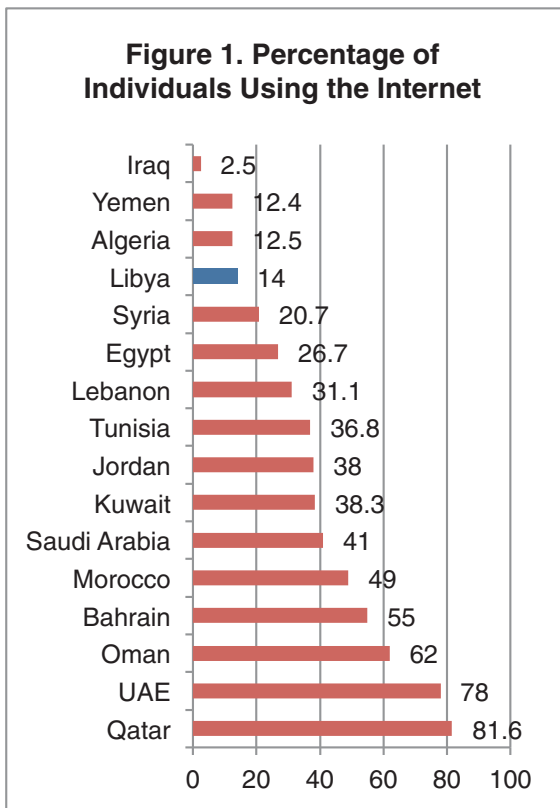
Following an overview of ICT development and prospects for growth in Libya, this brief proposes technology recommendations in three areas to strengthen Libya's transition to democracy, including: support for mobile election monitoring; increased Internet access and computer literacy training; and a broad e-government initiative.

POTENTIAL FOR ICT DEVELOPMENT IN LIBYA

ICT's transformative potential in Libya is currently limited by its existing reach and use. Mobile phones are much more affordable and accessible than land-based Internet connections and many users access the Internet primarily through their mobile devices. Mobile phone penetration in Libya has increased dramatically over the last decade, from one percent in 2001 to 171 percent in 2010, indicating multiple subscriptions per person (International

Telecommunication Union [ITU], 2012: 75). The Internet penetration rate, however, was only 14 percent as of 2010, which is lower than many other countries in the region (see Figures 1 and 2 for the comparative percentages). In March 2012, the World Bank announced a new initiative to expand broadband access in the Middle East and North

Africa (MENA) region, building on existing infrastructure to create regional broadband infrastructure networks (World Bank, 2012). Broadband traffic is expected to more than double in the MENA region in the next five years which is the fastest growth rate in the world.



Source: ITU, 2012: 22, 26.

Twenty-four cities in Libya have high-speed wireless Internet access and a project to build a fibre network covering over 13,000 km of Libyan territory is underway (ITU, 2012: 76). The communications and media market was a government monopoly under Colonel Gaddafi’s regime, but in the wake of the revolution, the liberalization of the media regulatory landscape, combined with continued infrastructure developments, could result in expanded Internet use and reduced controls on information and communication.

Recognizing this opportunity, the NTC has made ambitious plans for an “e-Libya” initiative supporting four main objectives: open and transparent government; the provision of government services online; improved ecommerce capacities; and the improved use of technology in the educational system (Ministry of Communication and Informatics [CIM], 2012). The size of investments under the old regime was significant. With growing market demand and political backing, continued investment in Libya’s technological and human capacities could have exponential returns for both economic and political development in the country.

PROPOSALS FOR EXPANDING ICT TO SUPPORT DEMOCRATIZATION

On July 7, 2012, Libyans elected a 200-seat General National Assembly in their first democratic election since the downfall of the previous regime. With a voter participation rate of 62 percent, and an upcoming constitutional referendum and separate presidential election scheduled, the public will for establishing a democratic government in Libya appears strong.

Three policies to further advance Libya's democratization process using ITC are recommended: an SMS election monitoring campaign for the upcoming elections; improved ICT training in schools; and technical assistance to support e-government initiatives. The role of the international community should be to support these efforts without attempting to directly influence democratization processes.

SUPPORT MOBILE ELECTION MONITORING

The July 7, 2012 Libyan general election was monitored by the Shahed Network for Election Monitoring (SNEM), a domestic coalition of civil society organizations and individuals, supplemented by international election observers from the European Union and The Carter Center, a US-based NGO (Gumuchian and Shuaib, 2012).

The SNEM recruited and trained over 2,000 volunteer observers, covering 78 percent of polling centres and 34 percent of polling stations in all 13 districts of the country (SNEM, 2012: 1). To collect their data, SNEM contacted and surveyed volunteer observers at a random sample of 25 percent of the polling locations on the morning of the election; observers could also call a hotline to report any disruptions or irregularities in the voting process. The SNEM reported attempts to sway voters, delays in the opening of some polling stations and confusion

about the voting procedures among the High National Election Commission (HNEC) staff. More serious incidents included violent attacks on polling stations in certain regions. Despite these irregularities, the majority of polling stations were open and well equipped, and international and domestic observers judged the election results to be valid.

Although the HNEC has yet to announce precise dates, the upcoming referendum on the new constitution and the presidential election are expected to take place in October 2012 and early 2013, respectively (HNEC, 2012). There is, therefore, a small time frame for the international community to work with the SNEM to improve its data collection and analysis methods — a project that would, in turn, help the HNEC to improve its election procedures. Extensive cellular coverage and high rates of cellphone use in Libya suggest that mobile devices have a promising role to play in election monitoring. With donor support, the SNEM could implement a reporting system based on mobile technology, allowing observers to submit data directly via SMS. The data could be compiled in real-time on a central computer, improving the reliability and coverage of election monitoring reports. As a further benefit, increased citizen participation would build confidence in, and ownership of, the election process.

In Yemen, Resonate! The Yemen and Holool Foundation, an international NGO, piloted an SMS monitoring system for the early presidential election on February 21, 2012. Youth election monitors were recruited and trained to cover 313 election centres in five districts. The organization received and processed over 9,000 SMS reports, identifying a number of election malpractices (Resonate! Yemen and Holool Foundation, 2012). This project could serve as a model for implementation in Libya.

CURRENT DONOR ICT-RELATED INITIATIVES IN LIBYA

International donors have already begun to show interest in funding development of the ICT sector to support Libya's democratization efforts:

- The United Nations Education, Scientific and Cultural Organization (UNESCO) contributed to a US\$72-million fund for The National ICT Project for Capacity Building in Higher Education. Operational since 2007, this project has seen the construction of a wide area network connecting all Libyan higher education campuses, and local area networks to support ICT facilities on campuses (UNESCO, 2007).
- The United Nations Development Programme (UNDP) funds a small project (US\$16,000) to increase ICT capacity within the General People's Committee for Foreign Liaison and International Cooperation (UNDP, 2010).
- The United States has committed US\$5 million to the Libya Transition Initiative, including the Tripoli Free Media Center, which officially opened in March 2012. The Center provides resources and training to civil society organizations and media outlets with an objective to "improve public communications to facilitate citizen awareness and engage in political processes transforming Libya into a free and democratic nation" (United States Agency for International Development [USAID], 2012).
- In May 2012, the United Kingdom signed a Memorandum of Intentions to cooperate on the "e-Libya" initiative, aiming to "develop a modern and reliable communications infrastructure in Libya, spreading the practice of open government." Activities will include technical assistance to provide guidance, training, and education; development of physical infrastructure capacities; and policies to regulate the emerging ICT market. No funding amount was announced (Foreign and Commonwealth Office, 2012).
- Discussions are underway between Egypt and Libya to cooperate on cyber security and the development of a regulatory and legislative framework for the ICT sector (Ministry of Communications and Information Technology Egypt, 2012).

The technology required for a centralized SMS data collection system is accessible and inexpensive, both in terms of implementation and reporting data using the service. Inexpensive software can direct incoming messages to a central computer system that processes and publishes the results quickly.² Following the Yemeni example, hiring local young people, who are already

familiar with mobile technology, is more economical than sending international observers to oversee election results, and more importantly, it could empower and engage youth in the Libyan democratization process.

² For example, Frontline SMS is a free software program used in over 70 countries. See www.frontlinesms.com.

INCREASE INTERNET ACCESS AND COMPUTER LITERACY

Currently, the freedom of expression and information that the Internet purports to afford is only available to a minority of Libyans. The infrastructure is still being built and costs to the end users are high. Furthermore, computer and media literacy must be developed alongside infrastructure if such investments are to be fruitful. The NTC's e-Libya policy, noted above, includes e-learning as a primary area of focus. The international community should support this initiative's plans to integrate ICT training into the public education system.

All levels of public education are free to Libyan citizens; about 2.2 million currently attend some level of schooling (Eldresi, Adams and Sweisi, 2008), making the public education system a suitable vehicle to disseminate ICT training. The government under Colonel Gaddafi made efforts to modernize ICT training in the national education system, notably through a 2005 national policy for ICT in education. Related initiatives include the National Computer Project, that aimed to create over 5,000 computer labs in schools across the nation, and the Libya Higher Education and Research Network, that established Local Area Networks at all university campuses, a Wide Area Network to connect the universities and a national ICT resource centre for educators (Rhema and Miliszewska, 2010: 428). Despite the considerable ICT investments made by the previous government, many challenges still impede the progress of ICT training, including the lack of both Arabic-language products and ICT knowledge among teachers.

It is recommended that donors provide matching grants to co-fund the purchase of computers equipped with low-cost software, alongside the incorporation of computer literacy into the national education curriculum. The technology industry has proven willing to work to

increase global digital literacy;³ thus, to minimize costs, it is recommended that private sector partnerships be explored. Such partnerships could help to provide low-cost software and digital literacy training programs, such as those that have been successfully implemented in Egypt (Microsoft, 2010).



An elated voter casts her vote. UN photo by Samia Mahgoub.

At the professional level, Knowlogy International, a company that provides ICT training and development programs, was hired by the previous Libyan government to implement training facilities across Libya to certify government employees in the International Computer Driving License certification program. The program, which tests participants on basic ICT concepts and computer proficiency, has been successfully implemented in several other states in the MENA region (Knowlogy International, 2010). This training program should be extended to include Libyan educators, to build the capacity of teachers and professors to conduct ICT training and to effectively use computers and educational software as teaching tools.

3 For instance, Microsoft offers qualifying governments a Windows software package at US\$3.50 per license. See www.microsoft.com/education/ww/partners-in-learning/Pages/innovation-suite.aspx.

SUPPORTING THE E-LIBYA INITIATIVE

A suite of online and mobile technology for government functions, dubbed “e-government,” is used extensively in developed countries. It has improved citizens’ access to government services and information, and increases transparency, efficiency and regulation (Verma et al., 2012). Under Libya’s e-government program (e-Libya), the NTC is expanding the use of ICT for open government, public services, education and commerce (CIM, 2012). The current political and state-building transition provides an opportunity to strengthen this initiative through the development of more effective ministry websites along with ICT training for government employees. The ministry websites currently provide citizens with information, but they could be improved to provide direct access to government services. This would effectively reduce the barriers to participation caused by gender-based or social hierarchies and the geographic distance between administrative centres (Eldresi, Adams and Sweisi, 2008).

International donors could provide technical assistance during the democratic transition period to assess the existing e-government structure and identify possibilities for reform. Based on the findings of the assessment and the interest expressed by the NTC, the technical assistance could continue to support the implementation of improved e-government services, the provision of training to civil servants and the public promotion of e-government.

CONCLUSION

In the long process of democratization that many anticipate from the revolutionary protests and demonstrations in Libya, the nation could benefit from strong commitments to expand ICT infrastructure and

provide digital literacy training. For such investments to result in broad-based freedom of information and communication, however, access to digital resources must be widespread and affordable, with few restrictions or censorship (Stepanova, 2011: 3).

At this juncture of Libya’s political transformation, there is an opportunity to harness the information and communication possibilities of the Internet and mobile technology to pursue fair and accountable democracy. The international donor community should support the implementation of ICT in Libya’s democratic transition, following the modest package of recommendations outlined in this brief.

RECOMMENDATIONS TO INTERNATIONAL DONORS

- Partner with local NGOs to implement an SMS election monitoring campaign for the upcoming elections.
- Co-fund the purchase of low-cost computers and software to facilitate the integration of ICT training into the national curriculum.
- Provide technical assistance to assess the current e-government system and identify opportunities to improve online services. Support the expansion of existing ICT training programs among government employees and civil servants.

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AUTHORS' NOTE

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